

WHAT IS CLAIMED IS:

1. A gene encoding a protein consisting of an amino acid sequence in which one or more amino acid residues are deleted from the C-terminus of the amino acid sequence of SEQ ID NO: 4 and having a thermostable protease activity.

2. The protease gene according to claim 1, which encodes the amino acid sequence of SEQ ID NO:1.

3. The protease gene according to claim 2, which consists of the base sequence SEQ ID NO:2.

4. A protease gene which hybridizes with the protease gene according to claim 3 under stringent conditions and encodes a protein having a thermostable protease activity.

5. A protease gene encoding a protein consisting of an amino acid sequence in which one to several amino acid residues are deleted, substituted, inserted or added to the amino acid sequence of SEQ ID NO:1 and having a thermostable protease activity.

6. A gene encoding an amino acid sequence represented by formula I:

SIG-Ala-Gly-Gly-Asn-PRO [I]

wherein SIG represents an amino acid sequence of a signal peptide derived from a subtilisin, PRO represents an amino acid sequence of a protein to be expressed.

7. The gene according to claim 6, wherein SIG is the amino acid sequence SEQ ID NO:3.

8. The gene according to claim 6, wherein PRO is an amino acid sequence of a hyperthermostable protease derived from a hyperthermophile.

9. The gene according to claim 8, wherein PRO is an amino acid sequence of a protease derived from *Pyrococcus furiosus*.

10. The gene according to claim 9, wherein PRO comprises the amino acid sequence of the protease consisting of an amino acid sequence in which one or more amino acid residues are deleted from the C-terminus of the amino acid sequence of SEQ ID NO:4.

11. The gene according to claim 10, which is contained in a plasmid selected from the group consisting of pSP0124 or pSP0124ΔC.

12. The gene according to claim 6, wherein PRO comprises the amino acid sequence of SEQ ID NO:1.

13. A method of producing a protein, comprising:
culturing a bacterium of genus *Bacillus* into which the gene according to claim 6 is introduced; and
collecting the protein of interest from the culture.

14. The method of producing a protein according to claim 13, wherein the bacterium of genus *Bacillus* is *Bacillus subtilis*.

15. The method of producing a protein according to claim 13, wherein the gene is introduced into the bacterium of genus *Bacillus* by means of a plasmid vector.

16. The method of producing a protein according to claim 15, wherein a plasmid selected from the group consisting of pSP0124 or pSP0124ΔC is introduced into the bacterium of genus *Bacillus*.

17. The method of producing a protein according to claim 15, comprising culturing *Bacillus subtilis* DB104/pSP0124ΔC FERM P-16227, and collecting the protein of interest from the culture.

18. A plasmid vector into which the gene according to claim 6 is inserted.

19. The plasmid vector according to claim 18, selected from the group consisting of pSP0124 or pSP0124ΔC.